

6/3,K,AB/1 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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10474331 20312477

Target antigens for **prostate cancer** immunotherapy.

Saffran DC; Reiter RE; Jakobovits A; Witte ON

UroGenesys, Inc, Santa Monica, CA 90404, USA.

Cancer and metastasis reviews (UNITED STATES) 1999, 18 (4) p437-49,  
ISSN 0891-9992 Journal Code: C9H

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, ACADEMIC

The detection and **treatment** of **prostate cancer** has been markedly improved by the use of Prostate-Specific Antigen (PSA) as a serological biomarker for disease. However, even after surgical intervention and hormone ablation therapy, a significant proportion of patients progress to advanced metastatic disease, for which there is no cure. An important goal has become the identification of antigens in advanced stage **prostate cancer** that represent targets for therapy. Recently, great progress has been made to utilize immunological therapies to **treat** cancer. Monoclonal antibody therapy has been successfully approved for the **treatment** of breast cancer and B-cell lymphoma, and multiple clinical trials are currently in progress in a variety of cancers, including **prostate cancer**. Pre-clinical and clinical studies are also underway to evaluate cancer vaccine approaches directed against antigens that are highly expressed in prostate and other cancers. This article describes several target antigens expressed in **prostate cancer** and immunological approaches directed against them that may be effective for **treating prostate cancer** patients.

Target antigens for **prostate cancer** immunotherapy.

The detection and **treatment** of **prostate cancer** has been markedly improved by the use of Prostate-Specific Antigen (PSA) as a serological...

6/3,K,AB/7 (Item 7 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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10232697 20046038

Monoclonal antibodies: will they become an integral part of the evaluation and **treatment of prostate cancer**--focus on **prostate-specific membrane antigen**?

Chang SS; Bander NH; Heston WD

Department of Urology, Memorial Sloan-Kettering Cancer Center, New York, NY 10021, USA.

Current opinion in urology (UNITED STATES) Sep 1999, 9 (5) p391-5,  
ISSN 0963-0643 Journal Code: DGP

Contract/Grant No.: DK/CA 47650, DK, NIDDK

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

Over the past two decades, monoclonal antibody technology has had an increasing impact on clinical diagnostic and therapeutic options, and this is true in the realm of managing **prostate cancer**. Several targets such as **prostate**-specific antigen and prostatic acid phosphatase as well as, more recently, angiogenic antigens such as vascular endothelial growth factor have been examined for therapy. Prostate-specific membrane antigen, a type II integral membrane glycoprotein initially characterized by the monoclonal antibody 7E11, has shown promise. Recent evidence suggests that prostate-specific membrane antigen is also expressed in tumor-associated neovasculature of a wide variety of **malignant** neoplasms. With its expression in **prostate** secretory-acinar epithelium and the prostate and in the neovasculature associated with tumors, prostate-specific membrane antigen represents an excellent antigenic target for monoclonal antibody diagnostic and therapeutic options. As research continues, the role of monoclonal antibody imaging and therapy will become increasingly important in the management of **prostate cancer**.

Monoclonal antibodies: will they become an integral part of the evaluation and **treatment of prostate cancer**--focus on **prostate-specific membrane antigen**?

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9942465 99297012

Intravenous injection of an immunoconjugate (anti-PSA-IgG conjugated to 5-fluoro-2'-deoxyuridine) selectively inhibits cell proliferation and induces cell death in human **prostate cancer** cell tumors grown in nude mice.

Sinha AA; Quast BJ; Reddy PK; Elson MK; Wilson MJ

Department of Genetics, University of Minnesota, St. Paul, USA.

Anticancer research (GREECE) Mar-Apr 1999, 19 (2A) p893-902, ISSN 0250-7005 Journal Code: 59L

Contract/Grant No.: DK-51348, DK, NIDDK

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Current chemotherapeutic and/or endocrine **treatments** for adenocarcinoma of the prostate are not delivered selectively to **prostate cancer** cells, therefore, they are used in very high doses that induce many unpleasant side effects in patients. New approaches are, therefore, needed to deliver drugs directly to **prostate cancer** cells to improve **treatment** effects. We hypothesized that **antibody** immunoglobulin G (IgG) against human **prostate specific antigen** (PSA) (anti-PSA-IgG) could function as a carrier protein for conjugated chemotherapeutic drugs (such as 5-fluoro-2'-deoxyuridine, doxorubicin, etc.) and that the immunoconjugate could be delivered selectively to PSA-producing neoplastic prostate. Immunoconjugate would then preferentially inhibit cell proliferation and induce cell death in PSA-producing tumor cells, but not in non-PSA-producing **prostate cancer** cells or other solid organs of the host. The short-term **treatment** effect could be assessed by measuring cell death and cell proliferation in tumor-bearing animals. We tested our hypothesis by intravenously injecting an immunoconjugate (anti-PSA-IgG-5-flu-2'-d) into nude mice with subcutaneous PSA-producing LNCaP or non-PSA-producing Du-145 prostate tumors. During 5 days of **treatment**, we observed that immunoconjugate was retained preferentially in PSA-producing LNCaP tumors where it produced cytotoxic effects in neoplastic prostate cells as revealed by decreased cell proliferation and increased cell death, but similar effects were not observed in non-PSA-producing Du-145 tumor cells or mouse organs. Analysis of untreated control mouse with LNCaP tumor, anti-PSA-IgG alone, anti-irrelevant-IgG-drug complex, and drug alone **treatments** indicated that there was little or no cytotoxic effects of these **treatments** on LNCaP and Du-145 tumors, and host organs. Our analysis of control and experimental data showed that the immunoconjugate was highly specific in imparting cytotoxic effects on LNCaP prostate tumors, but not on Du-145 tumors and mouse organs. Thus, we have shown that the immunoconjugate selectively delivered a chemotherapeutic drug to PSA-producing **prostate tumor** cells where it produced measurable cytotoxic effects on cell proliferation and cell death. This is the first report to show a successful delivery of a chemotherapeutic drug in the immunoconjugate to PSA-producing LNCaP prostate tumors in nude mice and without induc

9489981 98192203

Interferon-gamma and monoclonal antibody 131I-labeled CC49: outcomes in patients with androgen-independent **prostate cancer**.

Slovin SF; Scher HI; Divgi CR; Reuter V; Sgouros G; Moore M; Weingard K; Pettengall R; Imbriaco M; El-Shirbiny A; Finn R; Bronstein J; Brett C; Milenic D; Dnistrian A; Shapiro L; Schlom J; Larson SM

Department of Medicine, Memorial Sloan-Kettering Cancer Center, New York, New York 10021, USA.

Clinical cancer research (UNITED STATES) Mar 1998, 4 (3) p643-51, ISSN 1078-0432 Journal Code: C2H

Contract/Grant No.: CA09512, CA, NCI; CA05826, CA, NCI

Languages: ENGLISH

Document type: JOURNAL ARTICLE

To assess the tumor targeting, safety, and efficacy of monoclonal antibody 131I-labeled CC49 in patients with androgen-independent **prostate cancer**, 16 patients received 75 mCi/m2 of the radiolabeled antibody after 7 days of IFN-gamma pretreatment. Sequential tumor biopsies in three patients showed a median 5-fold (range, 2-6-fold) increase in the proportion of cells staining positively for the TAG-72 antigen, whereas one showed a decrease in staining. Fourteen patients received 131I-labeled CC49, whereas 2 showed a disease-related decrease in performance status, precluding antibody **treatment**. The antibody localized to sites of metastatic androgen-independent **prostate cancer** in 86% (12 of 14; 95% confidence interval, 57-95%) of cases. Both osseous and extraosseous sites were visualized, and in six (42%) patients, more areas were visible when the radioimmunoconjugate was used than were apparent when conventional scanning techniques were used. The localization of the conjugate in the marrow cavity was usually a site not visualized by the radionuclide bone scan, in which the isotope localizes primarily to the tumor-bone interface. The dose-limiting toxicity was thrombocytopenia because five (36%) patients showed grade IV and seven (50%) showed grade III effects. In addition, six (42%) patients, four of whom were hospitalized, showed a flare in baseline pain, and four showed a decrease in pain. No patient showed a >50% decline in prostate-specific antigen, although radionuclide bone scans remained stable in four cases for a median of 4 months. The results are consistent with dosimetry estimates showing that the delivered dose to tumor was subtherapeutic and suggest that approaches that exclusively target the bone tumor interface or the marrow stroma may be unable to completely eradicate disease in the marrow cavity. For CC49, improving outcomes would require repetitive dosing, which was precluded by the rapid development of a human antimouse antibody response.

Interferon-gamma and monoclonal antibody 131I-labeled CC49: outcomes in patients with androgen-independent **prostate cancer**.

... targeting, safety, and efficacy of monoclonal antibody 131I-labeled CC49 in patients with androgen-independent **prostate cancer**, 16 patients received 75 mCi/m2 of the radiolabeled antibody after 7 days of IFN...

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...; Radionuclide Imaging--RI; Prostatic Neoplasms--Radiotherapy--RT; Tomography, Emission-Computed; Tomography, Emission-Computed, Single-Photon; **Treatment Outcome**

Chemical Name: **Prostate-Specific Antigen**; (tumor-associated antigen 72; (**Antibodies**, Monoclonal; (**Antigens**, Neoplasm;

(Glycoproteins; (Iodine Radioisotopes; (Interferon Type II

ALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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02566310 Genuine Article#: LM449 Number of References: 22

Title: PR1 - A MONOCLONAL-ANTIBODY THAT REACTS WITH AN ANTIGEN ON THE  
SURFACE OF NORMAL AND MALIGNANT PROSTATE CELLS

Author(s): PASTAN I; LOVELACE E; RUTHERFORD AV; KUNWAR S; WILLINGHAM MC;  
PEEHL DM

Corporate Source: NCI,DIV CANC BIOL DIAGN & CTR,MOLEC BIOL LAB,BLDG 37,RM  
4E16/BETHESDA//MD/20892; STANFORD UNIV,MED CTR,DEPT  
UROL/STANFORD//CA/94305; MED UNIV S CAROLINA,DEPT PATHOL & LAB MED,DIV  
ANAT PATOL/CHARLESTON//SC/29425

Journal: JOURNAL OF THE NATIONAL CANCER INSTITUTE, 1993, V85, N14 (JUL 21)  
, P1149-1154

ISSN: 0027-8874

Language: ENGLISH Document Type: NOTE

Abstract: Background: The principal treatment for prostate cancer is surgery; prostate cancer is resistant to the common anticancer drugs. The only useful therapy for metastases involves diminishing testosterone levels by orchiectomy or administration of drugs, either of which may increase survival time. One approach to prostate cancer treatment is to use a monoclonal antibody (Mab) to target cytotoxic substances to these cancer cells. The MABs available either do not react uniformly with prostate cancer cells or react with normal tissues. Thus, a new MAB is needed. Purpose: The goal of this study was to isolate an MAB that reacts with an antigen present on the surface of prostate cancer cells. Methods: A strain of prostate cancer cells was isolated from a prostate cancer specimen, grown for 2-4 weeks in short-term culture, and used to immunize BALB/c mice. Hybridomas were then prepared by using spleen cells from the immunized mice. One hybridoma produced an MAB (PR1) that reacted with prostate cancers. Results: MAB PR1 is an IgM(kappa) subtype that reacts uniformly with the surface of most (25 of 26) adenocarcinomas of the prostate. It also reacts with the surface antigen on normal prostate epithelial cells and on cells from benign prostatic hyperplasia. MAB PR1 reacts with a limited number of normal tissues including a subset of principal cells located in the collecting ducts of the kidney. Conclusion: We conclude that MAB PR1 reacts with a differentiation antigen present in normal prostate and that this antigen continues to be expressed on almost all adenocarcinomas of the prostate. Implications: This antibody may be useful for the diagnosis of or therapy for prostate cancer.

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Abstract: Background: The principal treatment for prostate cancer is surgery; prostate cancer is resistant to

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\$0.00 0.056 DialUnits File410  
\$0.00 Estimated cost File410  
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File 155:MEDLINE(R) 1966-2000/Oct W1  
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File 55:Biosis Previews(R) 1993-2000/Aug W2  
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File 34:SciSearch(R) Cited Ref Sci 1990-2000/Aug W1  
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File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 1998 Inst for Sci Info  
File 340:CLAIMS(R)/US Patent 1950-00/Aug 01  
(c) 2000 IFI/CLAIMS(r)

Set	Items	Description
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? s antibod? (5n) (prostate(w)specific(w)antigen)		
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	103900	PROSTATE
	1651634	SPECIFIC
	616740	ANTIGEN
S1	426	ANTIBOD? (5N) (PROSTATE(W)SPECIFIC(W)ANTIGEN)
? s treat?		
	S2 3413478	TREAT?
? s s1 and s2		
	426	S1
	3413478	S2
S3	85	S1 AND S2
? s prostate(5n) (cancer or tumor or malignan?)		
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	897644	CANCER
	992605	TUMOR
	400195	MALIGNAN?
S4	49648	PROSTATE(5N) (CANCER OR TUMOR OR MALIGNAN?)
? s s3 and s4		
	85	S3
	49648	S4
S5	53	S3 AND S4
? rd		

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.

...examined 50 records (50)  
...completed examining records  
S6 41 RD (unique items)  
? t s6/3,k,ab/1-41

6/3,K,AB/1 (Item 1 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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10474331 20312477

Target antigens for **prostate cancer** immunotherapy.  
Saffran DC; Reiter RE; Jakobovits A; Witte ON  
UroGenesys, Inc, Santa Monica, CA 90404, USA.  
Cancer and metastasis reviews (UNITED STATES) 1999, 18 (4) p437-49,  
ISSN 0891-9992 Journal Code: C9H  
Languages: ENGLISH  
Document type: JOURNAL ARTICLE; REVIEW; REVIEW, ACADEMIC  
The detection and **treatment** of **prostate cancer** has been  
markedly improved by the use of Prostate-Specific Antigen (PSA) as a  
serological biomarker for disease. However, even after surgical  
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patients progress to advanced metastatic disease, for which there is no  
cure. An important goal has become the identification of antigens in  
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lymphoma, and multiple clinical trails are currently in progress in a  
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Target antigens for **prostate cancer** immunotherapy.  
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Set	Items	Description
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? s	psa or prostate(w)specific(w)antigen	
	16836	PSA
	103900	PROSTATE
	1651634	SPECIFIC
	616740	ANTIGEN
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	S2 3413478	TREAT?
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	24736	S1
	3413478	S2
S3	7464	S1 AND S2
? s	cancer? or tumor? or malignan?	
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	1231230	TUMOR?
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	2017844	S4
S5	6114	S3 AND S4
? s	unpredictab?	
	S6 12545	UNPREDICTAB?
? s	s5 and s6	
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	12545	S6
S7	4	S5 AND S6
? rd		

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.  
...completed examining records

S8 2 RD (unique items)  
? t s8/3,k,ab/1-2

8/3,K,AB/1 (Item 1 from file: 155)  
DIALOG(R)File 155:MEDLINE(R)  
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09559636 98346858  
Neural network analysis of combined conventional and experimental prognostic markers in prostate cancer: a pilot study.  
Naguib RN; Robinson MC; Neal DE; Hamdy FC  
Department of Electrical and Electronic Engineering, University of Newcastle upon Tyne, UK.  
British journal of cancer (SCOTLAND) Jul 1998, 78 (2) p246-50, ISSN 0007-0920 Journal Code: AV4

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Prostate **cancer** is the second most common **malignancy** in men in the UK. The disease is **unpredictable** in its behaviour and, at present, no single investigative method allows clinicians to differentiate between tumours that will progress and those that will remain quiescent. There is an increasing need for novel means to predict prognosis and outcome of the disease. The aim of this study was to assess the value of artificial neural networks in predicting outcome in prostate **cancer** in comparison with statistical methods, using a combination of conventional and experimental biological markers. Forty-one patients with different stages and grades of prostate **cancer** undergoing a variety of **treatments** were analysed. Artificial neural networks were used as follows: eight input neurons consisting of six conventional factors (age, stage, bone scan findings, grade, serum **PSA**, **treatment**) and two experimental markers (immunostaining for bcl-2 and p53, which are both apoptosis-regulating genes). Twenty-one patients were used for training and 20 for testing. A total of 80% of the patients were correctly classified regarding outcome using the combination of factors. When both bcl-2 and p53 immunoreactivity were excluded from the analysis, correct prediction of the outcome was achieved in only 60% of the patients ( $P = 0.0032$ ). This study was able to demonstrate the value of artificial neural networks in the analysis of prognostic markers in prostate **cancer**. In addition, the potential for using this technology to evaluate novel markers is highlighted. Further large-scale analyses are required to incorporate this methodology into routine clinical practice.

Neural network analysis of combined conventional and experimental prognostic markers in prostate **cancer**: a pilot study.

Prostate **cancer** is the second most common **malignancy** in men in the UK. The disease is **unpredictable** in its behaviour and, at present, no single investigative method allows clinicians to differentiate between...

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18/3,K,AB/38 (Item 3 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2000 Inst for Sci Info. All rts. reserv.

02566310 Genuine Article#: LM449 Number of References: 22  
Title: PR1 - A MONOCLONAL-ANTIBODY THAT REACTS WITH AN ANTIGEN ON THE  
SURFACE OF NORMAL AND MALIGNANT PROSTATE CELLS  
Author(s): PASTAN I; LOVELACE E; RUTHERFORD AV; KUNWAR S; WILLINGHAM MC;  
PEEHL DM  
Corporate Source: NCI,DIV CANC BIOL DIAGN & CTR,MOLEC BIOL LAB,BLDG 37,RM  
4E16/BETHESDA//MD/20892; STANFORD UNIV,MED CTR,DEPT  
UROL/STANFORD//CA/94305; MED UNIV S CAROLINA,DEPT PATHOL & LAB MED,DIV  
ANAT PATOL/CHARLESTON//SC/29425  
Journal: JOURNAL OF THE NATIONAL CANCER INSTITUTE, 1993, V85, N14 (JUL 21)  
, P1149-1154  
ISSN: 0027-8874

Language: ENGLISH Document Type: NOTE

Abstract: Background: The principal **treatment for prostate cancer** is surgery; **prostate cancer** is resistant to the common anticancer drugs. The only useful therapy for metastases involves diminishing testosterone levels by orchiectomy or administration of drugs, either of which may increase survival time. One approach to **prostate cancer treatment** is to use a monoclonal antibody (MAb) to target cytotoxic substances to these cancer cells. The MABs available either do not react uniformly with **prostate cancer** cells or react with normal tissues. Thus, a new MAB is needed. Purpose: The goal of this study was to isolate an MAB that reacts with an antigen present on the surface of **prostate cancer** cells. Methods: A strain of **prostate cancer** cells was isolated from a **prostate cancer** specimen, grown for 2-4 weeks in short-term culture, and used to immunize BALB/c mice. Hybridomas were then prepared by using spleen cells from the immunized mice. One hybridoma produced an MAB (PR1) that reacted with prostate cancers. Results: MAB PR1 is an IgM(kappa) subtype that reacts uniformly with the surface of most (25 of 26) adenocarcinomas of the prostate. It also reacts with the surface antigen on normal prostate epithelial cells and on cells from benign prostatic hyperplasia. MAB PR1 reacts with a limited number of normal tissues including a subset of principal cells located in the collecting ducts of the kidney. Conclusion: We conclude that MAB PR1 reacts with a differentiation antigen present in normal prostate and that this antigen continues to be expressed on almost all adenocarcinomas of the prostate. Implications: This antibody may be useful for the diagnosis of or therapy for **prostate cancer**.

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SURFACE OF NORMAL AND MALIGNANT PROSTATE CELLS

Abstract: Background: The principal **treatment for prostate cancer** is surgery; **prostate cancer** is resistant to the common anticancer drugs. The only useful therapy for metastases

18/3,K,AB/36 (Item 1 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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08736924 Genuine Article#: 323EN Number of References: 32  
Title: Expression of Lewis carbohydrate antigens and chromogranin A in human prostatic cancer  
Author(s): Mariano A; DiCarlo A; Santonastaso C; Oliva A; Darmiento M; Macchia V (REPRINT)  
Corporate Source: UNIV NAPLES FEDERICO II,DIPARTIMENTO BIOL & PATOL CELLULARE & MOL L CALIF, VIA SERGIO PANSINI 5/I-80131 NAPLES//ITALY/ (REPRINT); UNIV NAPLES FEDERICO II,DIPARTIMENTO BIOL & PATOL CELLULARE & MOL L CALIF/I-80131 NAPLES//ITALY//; UNIV NAPLES FEDERICO II,CATTEDRA UROL/I-80131 NAPLES//ITALY//; UNIV PISA,DIPARTIMENTO PATOL SPERIMENTALE BIOTECNOL MED INF/I-56126 PISA//ITALY/  
Journal: INTERNATIONAL JOURNAL OF ONCOLOGY, 2000, V17, N1 (JUL), P167-171  
ISSN: 1019-6439 Publication date: 20000700  
Publisher: PROFESSOR D A SPANDIDOS, 1, S MERKOURI ST, EDITORIAL OFFICE, ATHENS 116 35, GREECE  
Language: English Document Type: ARTICLE  
Abstract: The prostate specific antigen (PSA) content, the neuroendocrine differentiation and the Lewis(y) and the expression of related carbohydrate antigens in pathological prostatic tissues were determined. These included 13 cancers and 11 benign hyperplasias. PSA is expressed strongly in hyperplastic and poorly in neoplastic tissues. The neuroendocrine differentiation detected by a monoclonal antibody directed against chromogranin A (CgA) is a frequent event in carcinomas and rare in hyperplastic prostate. The Lewis(y) and related carbohydrate antigens, evaluated by the reactivity of the tissues to two monoclonal antibodies MAbB3 and MAbB1, are expressed in a considerable percentage in **malignant** tissues of **prostate** and only occasionally in benign lesions. Our results suggest that immunoblotting with antibodies against CgA, B3 and B1 on the tissues, obtained after surgery, may be useful to obtain more information on the neoplastic transformation of human prostate. Furthermore, the expression of Lewis(y) and related carbohydrate antigens on the surface of **prostate cancer** suggest that, following a clinical trial, an immunotoxin combination of MAbB3 or MAbB1 and Pseudomonas exotoxin, may be used in the **treatment of prostate cancer**.

...Abstract: tissues to two monoclonal antibodies MAbB3 and MAbB1, are expressed in a considerable percentage in **malignant** tissues of **prostate** and only occasionally in benign lesions. Our results suggest that immunoblotting with antibodies against CgA...

IALOG(R)File 55:BIOSIS Previews(R)  
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10180641 BIOSIS NO.: 199698635559

Monoclonal antibody PD-41 recognises a **prostate cancer**  
associated antigen whose expression increases in metastases and following  
hormonal therapy.

AUTHOR: Bazinet Michel(a); Hamdy Seif M; Begin Louis R; Aprikian Armen G;  
Fair William R; Wright George L Jr

AUTHOR ADDRESS: (a)Dep. Urology Montreal General Hosp., 1650 Cedar Avenue,  
Montreal, PQ H3G 1A4\*\*Canada  
1995

JOURNAL: International Journal of Oncology 7 (6):p1421-1425 1995

ISSN: 1019-6439

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Tissues of prostatic origin representing variable phenotypes were tested for reactivity to the **prostate cancer** specific mouse monoclonal antibody PD-41. Avidin biotin immunoperoxidase was applied on formalin-fixed, paraffin-embedded tissue sections of 15 benign prostatic hyperplasia (BPH), 23 prostatic intraepithelial neoplasia (PIN), 14 untreated primary adenocarcinoma, 35 diethylstilbestrol (DES) **treated** tumors, 50 lymph node and 11 bone metastases. Specimens were stratified according to the percentage of tumor cells expressing PD-41 antigen and degree of staining intensity, and correlated with PIN grade, Gleason score, flow cytometry (FCM) measured DNA ploidy, and reactivity to other antibodies. In PIN, 4 specimens (17.4%) showed reactivity in a significant number of cells while a few cells were reactive in most cases. PD-41 was significantly reactive (gt 5% of tumor cells) in 88% of nodal metastases and in 73% of bone metastases in contrast to 49% reactivity in primary tumors ( $p=0.0003$ ). There was a tendency of increased antigen expression in hormonally **treated** primary tumors. In addition, involutional and metaplastic changes in hormonally **treated** cases were reactive in many instances. Semiquantitative evaluation of PD-41 reactivity showed a statistically significant correlation with Gleason score in primary tumors ( $p=0.007$ ) and in lymph node metastases ( $p=0.009$ ). Moreover, the PD-41 antibody reacted in metastatic lesions that failed to express both prostatic acid phosphatase and **prostate specific antigen**. These data suggest that monoclonal **antibody** PD-41 merits further investigation to evaluate its potential diagnostic, prognostic and therapeutic role in **prostate cancer**.

Monoclonal antibody PD-41 recognises a **prostate cancer**  
associated antigen whose expression increases in metastases and following  
hormonal therapy.

ABSTRACT: Tissues of prostatic origin representing variable phenotypes were

18/3,K,AB/32 (Item 32 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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05695915 90019579

Radioimmunosciintigraphy of **prostate cancer**.

Babaian RJ; Lamki LM

Department of Urology, University of Texas M.D. Anderson Cancer Center,  
Houston 77030.

Seminars in nuclear medicine (UNITED STATES) Oct 1989, 19 (4) p309-21,  
ISSN 0001-2998 Journal Code: UNY

Languages: ENGLISH

Document type: JOURNAL ARTICLE; REVIEW; REVIEW, TUTORIAL

The development of hybridoma technology has increased research efforts and clinical applications in the area of radioimmunodetection. Despite the many investigative antibodies directed against prostatic tissue or **prostate cancer** cell lines, only two have been tested in clinical trials. A <sup>111</sup>In-labeled **antibody** directed against **prostate-specific antigen**, the best available serum **tumor** marker for **prostate cancer**, has shown poor sensitivity in limited clinical radioimmunoimaging trials. Monoclonal antibodies against prostatic acid phosphatase have shown better imaging results, particularly at higher antibody doses (greater than or equal to 40 mg). The limitations of this antibody include the poor results in detecting soft tissue lesions, including the primary lesion; the development of human antimouse antibodies in 50% of the patients at doses greater than or equal to 40 mg; the expense of the antibody; and the fact that better results are currently attainable by other less expensive imaging modalities. If and when a more suitable antibody or fragment is developed, the prospect of improved staging and new **treatments** using immunologic conjugates carrying therapeutic agents may become realities. Until such time, prostatic cancer will be staged with other currently available imaging modalities and conventional therapies with their limitations will remain state of the art.

Radioimmunosciintigraphy of **prostate cancer**.

... in the area of radioimmunodetection. Despite the many investigative antibodies directed against prostatic tissue or **prostate cancer** cell lines, only two have been tested in clinical trials. A <sup>111</sup>In-labeled **antibody** directed against **prostate-specific antigen**, the best available serum **tumor** marker for **prostate cancer**, has shown poor sensitivity in limited clinical

18/3,K,AB/22 (Item 22 from file: 155)  
DIALOG(R) File 155:MEDLINE(R)  
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08874338 96434799

Antibody immunoglobulin G (IgG) against human prostatic specific antigen (PSA) as a carrier protein for chemotherapeutic drugs to human prostate tumors: Part 1. A double immunofluorescence analysis.

Sinha AA; Sackrison JL; DeLeon OF; Wilson MJ; Gleason DF

Research Service, Veterans Affairs Medical Center, Minneapolis, MN 55417, USA.

Anatomical record (UNITED STATES) Aug 1996, 245 (4) p652-61, ISSN 0003-276X Journal Code: 4QM

Languages: ENGLISH

Document type: JOURNAL ARTICLE

BACKGROUND: Adenocarcinoma of the prostate (CaP) is the the second highest cause of cancer deaths in U.S. males. Current chemotherapeutic and/or endocrine treatments do not specifically and selectively target tumor cells of prostate cancer and benign prostatic hyperplasia (BPH). We hypothesized that because of the specific binding characteristics of antibody immunoglobulin G (IgG) to human prostatic-specific antigen (PSA), PSA-IgG could function as a carrier protein for conjugated chemotherapeutic drugs and that the immunoconjugate would selectively bind to prostatic epithelial cells and their tumors, but not to epithelial cells of unrelated organs. Our objective was to test the hypothesis using human prostatectomy specimens. METHODS: WE used several derivatives of 5'-fluorouracil, namely, 5'-fluoro-2'-deoxyuridine (5'-Fu-2'-d), 5'-fluoro-2'-deoxyuridine-5' monophosphate (5'-Fu-2'-d-5'-mp), 5'-fluoro-2'-deoxyuridine-5'-(p-aminophenyl) monophosphate (5'-Fu-2'-d-5'-amp), to conjugate with rabbit anti-PSA-IgG together with fluorescent markers (such as rhodamine and fluorescein or fluorescein isothiocyanate: FITC). Prostate specimens were obtained from prostatectomy patients who had not been treated with cytotoxic drugs before surgery. We evaluated formalin-fixed and paraffin-embedded sections as well as cryostat sections of frozen specimens for localization of PSA-IgG alone and PSA-IgG-drug immunoconjugate using immunoperoxidase (IP) and single and/or double immunofluorescence (IF) localization techniques. RESULTS: Our study showed that the immunoconjugate (PSA-IgG-5'-Fu-2'-d) bound to PSA (molecular size of approximately 34 KDa) on nitrocellulose sheets in Western immunoblots of extracts of BPH and CaP tissues. This binding of immunoconjugate to PSA on immunoblots was similar to that of the unconjugated PSA-IgG. Immunostaining patterns for rabbit anti-PSA-IgG and PSA-IgG-5'-Fu-2'-d immunoconjugate were similar and specific for prostate epithelial cells and their tumors, as revealed by IP techniques. To demonstrate that both the antibody and drug localized in the same group of prostatic epithelial cells, we used an immunoconjugate in which the PSA-IgG was labeled with rhodamine and 5'-Fu-2'-d-5'-amp with FITC. Our study showed that fluorescence for rhodamine and FITC was present in the same group of prostatic epithelial cells. Phase contrast microscopy demonstrated details of prostatic glandular epithelium and connective tissues. Our study showed that fluorescence for rhodamine and FITC and immunostaining by IP techniques were not observed in prostate sections incubated with normal rabbit serum. CONCLUSIONS: We have shown that conjugation of 5'-Fu derivatives to PSA-IgG did not affect either the selectivity or specificity of the antibody for prostatic epithelial cells. Differential immunofluorescence study has shown that PSA-IgG may function as a carrier protein for chemotherapeutic drugs to prostate epithelial cells and their tumors. Furthermore, FITC-labeled 5'-Fu-2'-d did not specifically localize in prostatic glands, kidney, lungs, bladder, or colon. Because of the specificity and selectivity of the

immunoconjugate for prostatic epithelial cells and their tumors, the immunoconjugate could be used in small dosages to **treat** prostatic tumors and such **treatment** would greatly reduce many unpleasant side effects in patients. This is the first report to show that PSA-IgG can function as an organ specific carrier protein for chemotherapeutic drugs to human prostate epithelium and its tumors.

... second highest cause of cancer deaths in U.S. males. Current chemotherapeutic and/or endocrine **treatments** do not specifically and selectively target **tumor** cells of **prostate cancer** and benign prostatic hyperplasia (BPH). We hypothesized that because of the specific binding characteristics of...

... or fluorescein isothiocyanate: FITC). Prostate specimens were obtained from prostatectomy patients who had not been **treated** with cytotoxic drugs before surgery. We evaluated formalin-fixed and paraffin-embedded sections as well...

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Chemical Name: **Prostate-Specific Antigen;** (  
**Antibodies;** (Antineoplastic Agents; (Carrier Proteins; (Drug Carriers  
; (Fluorescent Dyes; (IgG; (Immunotoxins; (Rhodamines; (Fluorescein-5-isoth  
iocyanate



30/3,K,AB/2 (Item 2 from file: 155)  
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8/11

07737873 94181155

Anti-idiotypes against an anti-haloperidol antibody bind to sigma receptors.

Masuzawa N; Togashi S; Itoh N; Kobayashi T; Inazuki G; Fujimaki M; Nakamura H; Nakayama H

Department of Psychiatry, Niigata University School of Medicine, Japan.

Neuroscience research (IRELAND) Oct 1993, 18 (1) p27-34, ISSN

0168-0102 Journal Code: OAQ

Languages: ENGLISH

Document type: JOURNAL ARTICLE

Anti-idiotypic monoclonal antibodies that interact with the binding site of sigma receptors were generated. First, BALB/c mice were immunized with a haloperidol-bovine serum albumin conjugate, and monoclonal anti-haloperidol antibodies that recognize the piperidiny moiety of haloperidol molecule were obtained. Second, for generation of anti-idiotypic antibodies, BALB/c mice were immunized with the anti-haloperidol monoclonal antibodies coupled to keyhole

limpet hemocyanin. Anti-idiotypic antisera and three hybridomas secreting anti-idiotypic monoclonal antibodies were obtained. All of them were shown to inhibit [3H]haloperidol binding to the anti-haloperidol antibodies. The anti-idiotypes were potent in displacing the binding of [3H]haloperidol to rat brain sigma receptors. Furthermore, they significantly immunoprecipitated the sigma receptors from a detergent-solubilized preparation. These findings demonstrate the generation of anti-idiotypic monoclonal antibodies specifically interacting with membrane-bound and solubilized sigma receptors.

Oct 1993,

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limpet hemocyanin. Anti-idiotypic antisera and three hybridomas secreting anti-idiotypic monoclonal antibodies were obtained.

? ds

Set	Items	Description
S1	1165264	ANTIBOD?
S2	3760	KEYHOLE (W) LIMPET (W) HEMOCYANIN
S3	2722	S1 AND S2
S4	996659	CONJUGAT? OR LINK?
S5	1284	S3 AND S4
S6	23978	IDIOTYP?
S7	117	S5 AND S6
S8	89	RD (unique items)
S9	80	S8 AND PY<=1998
S10	24736	PSA OR PROSTATE (W) SPECIFIC (W) ANTIGEN
S11	0	S9 AND S10
S12	4	S5 AND S10
S13	2	RD (unique items)
S14	731	ANTIBOD? (5N) (KEYHOLE (W) LIMPET (W) HEMOCYANIN)
S15	341	S14 AND S4
S16	1	S15 AND S10
S17	0	S ANTIBOD? (5N) (LINK? OR CONJUGAT?)
S18	40178	ANTIBOD? (5N) (LINK? OR CONJUGAT?)
S19	318	S18 AND S2
S20	285	S19 AND PY<=1998
S21	96	S20 AND S14
S22	71	RD (unique items)
S23	62	S22 AND PY<1998
S24	62	RD (unique items)

? s s18 and s14

40178 S18

731 S14

S25 108 S18 AND S14

? s s25 and py<1998

Processing

108 S25

31212866 PY<1998

S26 85 S25 AND PY<1998

? rd

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.

...examined 50 records (50)

...completed examining records

S27 62 RD (unique items)

? s antibod? (2n) (linked or conjugated or coupled)

1165264 ANTIBOD?

425914 LINKED

82422 CONJUGATED

551549 COUPLED

S28 13479 ANTIBOD? (2N) (LINKED OR CONJUGATED OR COUPLED)

? s s27 and s28

62 S27

13479 S28

S29 10 S27 AND S28

? rd

>>>Duplicate detection is not supported for File 340.

>>>Records from unsupported files will be retained in the RD set.

...completed examining records

S30 10 RD (unique items)

? t s30/3,k,ab/1-10

30/3,K,AB/1 (Item 1 from file: 155)

DIALOG(R)File 155:MEDLINE(R)

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08179841 94147384

Immunogenicity in rabbits and mice of an **antibody**-chelate  
**conjugate** : comparison of (S) and (R) macrocyclic enantiomers and an  
acyclic chelating agent.

Watanabe N; Goodwin DA; Meares CF; McTigue M; Chaovapong W; Ransone CM;  
Renn O

Nuclear Medicine Service, VA Medical Center, Palo Alto 94304.

Cancer research (UNITED STATES) Feb 15 1994, 54 (4) p1049-54,

ISSN 0008-5472 Journal Code: CNF

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Languages: ENGLISH

Document type: JOURNAL ARTICLE

The macrocyclic bifunctional chelating agent 2-(p-bromoacetamidobenzyl)-1